III Corps and FH Reg 115-1

Climatic, Hydrological, and Topographic Services

Weather Support to III Corps and Fort Hood

Headquarters
III Corps and Fort Hood
Fort Hood, Texas
26 October 2010

UNCLASSIFIED

SUMMARY of CHANGE

III Corps & FH Reg 115-1
Weather Support to III Corps and Fort Hood

This administrative revision, dated 26 October 2010 –

- Updates location and contact information for weather station alternate operating location throughout document.

- Deletes requirement to supplement the Hood Army Airfield Automated Surface Observing System , and clarified back-up requirements.

- Clarifies tropical storm forecast procedures and adds sample to appendix G.

- Clarifies severe weather action procedures.

- Adds runway visual range special weather observation criteria for Robert Gray Army Airfield to appendix C.

- Adds sample of 5-day forecast to appendix G.

- Clarifies definition of blizzard conditions in appendix D, table D-1.

- Adds missing weather impact criteria to appendix H, table H-1.

- Clarifies pilot-to-metro service frequencies throughout document.

- Clarifies reporting procedures for tower visibility remark.

DEPARTMENT OF THE ARMY ***III CORPS & FH REG 115-1**
HEADQUARTERS, III CORPS AND FORT HOOD
FORT HOOD, TEXAS 76544
26 October 2010

Climatic, Hydrological, and Topographic Services

Weather Support to III Corps and Fort Hood

History. This publication is an administrative revision. Portions affected by this revision are listed in the summary of change.

Summary. This regulation implements Army Regulation (AR) 115-10 (Weather Support for the US Army {AFI 15-157 (IP)}) at Fort Hood.

Applicability. This regulation applies to III Corps and Fort Hood units, major subordinate commands, non-divisional units, and partners in excellence activities. During full mobilization requirements, this regulation remains in full effect.

Supplementation. Local supplementation of this regulation is prohibited except upon approval of the Assistant Chief of Staff (ACofS), G2.

Suggested improvements. The proponent of this regulation is the ACofS, G2. Users may send comments and suggested improvements on DA Form 2028 (Recommended Change to Publications and Blank Forms) to the Commander, III Corps and Fort Hood, ATTN: AFZF-GS-W, Fort Hood, Texas.

FOR THE COMMANDER:

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IAW FH Form 1853: S

Contents (Listed by paragraph and page numbers)

* This regulation supersedes III Corps & FH Reg 115-1, dated 7 July 2010.

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Chapter 1
Introduction

1-1. Purpose
This regulation defines the responsibilities of the 3d Weather Squadron (3 WS) for providing weather support to Fort Hood organizations in accordance with (IAW) Air Force Manual (AFI) 15-128 (Air and Space Weather Operations – Roles and Responsibilities) and AFMAN 15-129 (Air and Space Weather Operations – Processes and Procedures). It further specifies responsibilities incumbent upon III Corps and various Army units in providing support to 3 WS IAW Army Regulation (AR) 115-10 (Weather Support for the US Army {AFI 15-157 (IP)}) and 3d Air Support Operations Group (3ASOG) inter-service support agreement.

1-2. References
Required and related publications and prescribed and referenced forms are listed in appendix A.

1-3. Abbreviations and terms
Abbreviations and terms used in this regulation are explained in the glossary.

1-4. Supported units
The 3 WS provides weather support to the Fort Hood, Installation Management Command (IMCOM), III Corps, 1st Cavalry Division (1CD), 4th Combat Aviation Brigade (4CAB), 3rd Armored Cavalry Regiment (3ACR), 21st Cavalry Brigade (21CAV), and their subordinate aviation units.

1-5. 26th Operational Weather Squadron (26 OWS) and 3d Weather Squadron (3 WS) interaction
The 26th Operational Weather Squadron (26 OWS) is the regional weather center for the south central and southeastern United States (US). The 26 OWS is responsible for providing and arranging operational-level weather forecast products and support to Department of Defense (DOD) units assigned within and/or deployed into its area of responsibility (AOR) IAW AFI 15-128 and AFMAN 15-129. Specifically, the 26 OWS produces and disseminates forecast weather watches and warnings for Fort Hood. In addition, the 26 OWS produces and disseminates the terminal aerodrome forecast (TAF) for Robert Gray Army Airfield (RGAAF) and provides flight weather briefings to transient aircrews operating within their AOR. Similarly, the 3 WS provides or arranges for tactical-level weather support for Fort Hood, and associate units in-garrison and deployed. The 3 WS provides tailored weather intelligence information for Army training

and operational missions, translating terrestrial and space weather conditions into operational mission impacts. In addition, the 3 WS Weather Operations Center (WOC), RGAAF Weather Station, serves as the "eyes forward" for the 26 OWS by providing real-time interpretation of local weather information. *Note*: The 3 WS WOC will be referred to as the RGAAF Weather Station throughout this document.

Chapter 2
Responsibilities

2-1. Overview

a. The 3 WS is a US Air Force, Air Combat Command (ACC) unit, reporting directly to the 3ASOG, Fort Hood, Texas. The Commander, 3 WS is assigned as the staff weather officer (SWO) to the III Corps. The III Corps SWO also appoints subordinate officers to serve as weather plans officers for 1CD, 4CAB, 3ACR, and 21CAV. The flight chief for the RGAAF Weather Station is the SWO to the Garrison Commander and airfield manager.

b. The 3 WS has four operational weather flights. One flight is the RGAAF Weather Station. It provides 24 hours a day, 7 days a week weather support to the Fort Hood reservation, to include RGAAF and Hood Army Airfield (HAAF). The 3 WS Weather Plans Flight coordinates support for III Corps, 1CD, 4CAB, 3ACR, and 21 CAV.

2-2. The 3d Weather Squadron (3 WS) Commander

The 3 WS Commander will:

a. Provide or arrange for operational and staff weather support to III Corps and major corps elements to include 1CD, 4ID and 3ACR both in Garrison and in the field IAW AR 115-10 and this publication. Commander and staff personnel are available from 0730 to 1630, Monday through Friday (except federal holidays). See appendix J for telephone numbers.

b. Act as focal and coordination point for all weather and weather support related issues.

c. Retain Uniform Code of Military Justice, Article 15 (Nonjudicial Punishment) authority; Commander, Headquarters Ninth Air Force, Shaw Air Force Base (AFB), South Carolina, exercises special and summary court martial jurisdiction.

2-3. The 3d Weather Squadron (3 WS) Weather Plans Flight

The Weather Plans Flight will:

a. Provide or arrange for weather support to III Corps, 1CD, 4CAB, 3ACR, 21CAV, and attached units during major exercises and contingencies IAW AR 115-10 and this publication.

b. Understand the mission, organization, equipment, and operational commitments of the supported unit.

c. Inform the supported Commander of Air Force weather support capabilities, limitations and effective methods of using this support to plan and carry out operations.

d. Provide weather input to appropriate Army agencies for the creation of toxic hazard zones/corridors (THZ/Cs) and heat stress indices. 3 WS does not calculate THZ/Cs or heat stress indices.

e. Operate and maintain weather-dedicated Army modified table of organization and equipment (MTOE) and Air Force equipment, including vehicles, generators and communications equipment assigned to each command element listed above.

(1) Perform routine operator maintenance on Army MTOE equipment according to published Army standards.

(2) Operationally deploy, employ and re-deploy assigned MTOE equipment to meet 3 WS training objectives and support operational and exercise requirements of appropriate Army Commanders.

(3) Be responsible for accountability and safety of assigned equipment.

2-4. Robert Gray Army Airfield (RGAAF) Weather Station

The RGAAF Weather Station will:

a. Provide manual or automated surface weather observations for RGAAF and HAAF, and observed weather warning and weather advisories for the entire Fort Hood reservation (including RGAAF and HAAF) and the western training area (WTA) IAW AFMAN 15-111 (Surface Weather Observations), AFMAN 15-129 and this publication.

b. Provide mission planning and execution forecasts (i.e., flight weather briefings) for III Corps and Fort Hood assigned aviation units operating in garrison 24 hours a day, 7 days a week. The RGAAF Weather Station will provide briefings to transient aircraft when workload permits, otherwise transient aircraft will be referred to the 26 OWS for a flight weather briefing IAW AFMAN 15-129.

c. Provide weather input to appropriate Army agencies for the creation of THZ/Cs and heat stress indicies. 3 WS does not calculate THZ/Cs or heat stress indicies.

d. Act as the liaison with the 26 OWS at Barksdale AFB, Louisiana (United States Air Force [USAF] regional weather center).

e. Assist the RGAAF and HAAF air traffic control (ATC) tower personnel create and maintain visibility chart(s) or photo file of local visibility markers upon request.

f. Provide limited weather observation training and certification to ATC personnel as part of the Cooperative Weather Watch (CWW) Program IAW AFMAN 15-111 and Federal Aviation Administration (FAA) Order 7110.65 (Air Traffic Control).

g. Act as the point of contact (POC) for the New Tactical Forecast System (N-TFS) and Joint Environmental Toolkit (JET), the primary weather dissemination system.

h. Provide weather briefings to the Garrison Commander on request.

i. Provide day-to-day weather and climatology information to civilian contractors provided they are performing work for the DOD. Weather information cannot normally be provided to the general public unless imminent danger to life or property is involved. The National Weather Service is responsible for weather support to the general public and should be used when possible. IAW Air Force Instruction (AFI) 35-101 (Public Affairs Policies and Procedures), all non-military requests for meteorological information will be coordinated through the installation Public Affairs Office.

j. Request ATC tower personnel monitor the pilot-to-metro service (PMSV) frequency (306.5 UHF and 41.2 frequency modulation [FM]), as their duties permit, during RGAAF weather station equipment outages or evacuation.

k. Notify RGAAF Airfield Operations personnel during extended PMSV outages. Request they disseminate a notice to airmen (NOTAM) and/or airfield advisory for the outage. The RGAAF Weather Station will notify Airfield Operations personnel when PMSV service is restored.

2-5. Commanders of supported units

Commanders of supported units (III Corps, 1CD, 1st Air Cavalry Brigade [1ACB], 4 CAB, 3ACR, and 4th Squadron, 3d Armored Cavalry Regiment [4th SQ 3ACR]) will:

a. Ensure Headquarters, Headquarters Company (HHC) supplies equipment and maintenance in support of appropriate battlefield weather flights (BWFs) IAW with AR 115-10 and the current supported unit MTOE.

b. Ensure all equipment in the weather section of the unit MTOE is requisitioned and assigned to 3 WS for operator maintenance and property accountability.

c. Ensure MTOE equipment is not pulled from weather teams and used for other purposes except in extreme conditions and with coordination. Reduced weather MTOE can seriously degrade mission support capabilities.

d. Dispatch MTOE vehicles monthly due to the distance required to travel to HHC motor pools and limited Air Force weather personnel to perform more frequent dispatch routines.

e. Provide common table of allowance (CTA) equipment items such as tents, field heaters, cots, and other items required by BWFs to function in field environments.

f. Provide proper weapons and protective masks.

g. Provide or arrange for organizational and higher echelon maintenance for MTOE equipment assigned to weather teams.

h. Budget for, and provide sufficient funds for temporary duty assignments (TDYs), non-Air Force equipment and expendable supplies required to perform garrison and tactical missions. The 3 WS will manage these account(s).

i. Provide secure storage space for deployed BWFs.

2-6. III Corps Assistant Chief of Staff (ACofS), G2

The Assistant Chief of Staff (ACofS), G2 will:

a. Inform the III Corps SWO of any change in the operational weather support requirements of III Corps and Fort Hood.

b. Allow the III Corps SWO access to planning documents and ensure the SWO is included in planning activities that require weather support.

c. Notify the III Corps SWO of post alerts, recalls, exercises, or changes in readiness status that affect weather activities or require a weather response.

d. Ensure the G2 Special Security Office provides administrative oversight to 3 WS sensitive compartmented information (SCI) clearance processes, to include:

(1) Receive and maintain a 3 WS file for message traffic and notify 3 WS security personnel upon receipt of classified message traffic.

(2) Notification of all incidents involving 3 WS personnel which may impact SCI access and/or clearance.

2-7. Garrison Commander

The Garrison Commander will:

a. Provide funding for the 3 WS, to include funding for travel and per diem of Air Force personnel required for planning, training or providing weather support for installation operations IAW AR 115-10.

b. Provide the RGAAF Weather Station with an outlook of major activities planned at Fort Hood. This will ensure attention is focused on these periods when preparing forecasts and that the Garrison Command Staff can be notified ahead of time if significant weather is expected.

2-8. Directorate of Aviation Operations (DAO)

The Directorate of Aviation Operations (DAO):

a. Provides office space necessary to operate the garrison weather stations at RGAAF and HAAF, to include space for weather maintenance contract personnel.

b. Maintains Army-owned radio equipment supporting PMSV.

c. Notifies the RGAAF Weather Station of installation weather support requirements.

d. The airfield manager will:

(1) Allow or arrange for unrestricted access to meteorological equipment located throughout Fort Hood by 3 WS and weather maintenance contract personnel.

(2) Provide most current copies of the Flight Information Publication (FLIP) to the RGAAF Weather Station.

(3) Assist the RGAAF Weather Station in updating weather support information (duty hours, PMSV frequency, etc.) in the FLIPs.

(4) Provide a basic orientation of the airfield, to include location of meteorological sensors to newly assigned weather technicians.

e. Airfield Base Operations personnel will:

(1) Notify the RGAAF Weather Station of any aircraft mishap involving aircraft assigned to or operating from Fort Hood that occur in the local flying area as defined in Fort Hood Regulation 95-1 (Fort Hood Local Flying Rules). In addition, notify the RGAAF Weather Station of in-flight emergencies.

(2) Notify the RGAAF Weather Station when the N-TFS-JET systems are inoperable.

(3) Notify the RGAAF Weather Station when local NOTAMs and applicable directives change airfield minima.

(4) Disseminate a NOTAM and/or airfield advisory when notified by RGAAF Weather Station personnel of extended PMSV outages.

(5) Ensure weather watches, warnings and advisories are appropriately disseminated IAW local procedures.

f. ATC Services personnel at RGAAF and HAAF will:

(1) Notify the RGAAF Weather Station when the active runway changes.

(2) Notify the RGAAF Weather Station when the N-TFS-JET systems are inoperable.

(3) Provide a basic orientation of tower and army radar approach control (ARAC) facilities to newly assigned weather technicians.

(4) Monitor the PMSV frequency (306.5 UHF and 41.2 FM), as other duties permit, during RGAAF Weather Station equipment outage or evacuation.

(5) Participate in the CWW Program.

(a) The CWW is the name given for the collaboration between weather personnel and ATC personnel in identifying significant weather changes. The primary concern is the report of tower visibility different from the prevailing surface visibility, reporting of sector visibility, local pilot reports (PIREPs), and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources.

(b) Control tower personnel certified to take visibility observations will forward tower visibility observations to the RGAAF Weather Station when tower visibility is less than 4 statute miles and different from the surface prevailing visibility IAW AFMAN 15-111. The tower visibility can be included as a remark in manual observations.

(c) ATC personnel will pass all PIREPs to the RGAAF Weather Station.

(d) ATC personnel will notify the RGAAF Weather Station of changing weather conditions significantly different from those contained in the last disseminated observation. RGAAF weather station personnel will re-evaluate weather conditions whenever a reliable source (i.e. ATC, pilots, etc.) report weather conditions different from the last disseminated observation.

(e) Upon request, RGAAF Weather Station will provide assistance to help prepare control tower visibility aids.

2-9. Fort Hood Installation Operations Center (IOC)

The Fort Hood Installation Operations Center (IOC) will:

a. Serve as the primary focal point for the dissemination of all weather watches, warnings and advisories received from the 26 OWS (Air Force regional weather center) and/or RGAAF Weather Station to Fort Hood units and/or agencies listed in appendix B.

b. Notify the RGAAF Weather Station when damage reports due to a weather event are received from anywhere on the Fort Hood reservation.

c. Activate the mass notification system when notified of a tornado warning by the 26 OWS and/or RGAAF Weather Station.

2-10. Directorate of Public Works (DPW)

The Directorate of Public Works (DPW) will:

a. Notify 3 WS through RGAAF Airfield Operations when a test of the back-up power system to Building 90029 (Airfield Operations) will occur. If local weather conditions are unfavorable, DPW will delay the test.

b. Provide resources for purchasing, replacing, repairing, servicing, and installing Army-owned air conditioner and one generator required for the efficient operation of the Weather Surveillance Radar – 88 Doppler (WSR-88D) antenna site located in Granger, Texas.

c. Provide resources for purchasing, replacing, repairing, servicing, and installing Army-owned generator required for the efficient operation of the automated surface observing system (ASOS) (meteorological sensors) located on the south and north end of the runway at RGAAF.

d. Replace and/or repair damaged and/or burned out airfield obstruction lights and lenses on meteorological equipment located throughout the RGAAF and HAAF complex.

e. Assist in providing monetary estimates to damaged resources on Fort Hood caused by severe weather events for after-action reports to Air Force higher headquarters.

2-11. Network Enterprise Center (NEC)

The Network Enterprise Center (NEC) will:

a. Provide maintenance for RGAAF Weather Station, Building 90029, and HAAF, Building 7016, telephone (voice), and meteorological equipment data communication lines. Also, provide maintenance for data communication lines for all meteorological sensors located on RGAAF and HAAF.

b. Maintain common user communications, non-secure internet protocol router network (NIPRNET) service 24 hours a day, 7 days a week with a minimum 2-hour response time to repair outages during non-duty hours. Weather information, including weather warnings and advisories, are received and disseminated via NIPRNET making it critical to Fort Hood resource protection. Additionally, daily flying weather is gathered via the NIPRNET making an outage a degradation to flight safety.

2-12. Artillery meteorological (ARTYMET) sections

IAW AR 115-10, the III Corps, 1CD and 3ACR artillery meteorological (ARTYMET) sections will provide to the III Corps SWO (3 WS) upper air sounding data in world meteorological organization (WMO) coded format during tactical deployments or exercises when available. Tactical standard operating procedures (SOPs) maintained by the weather teams supporting Corps and Division echelons define current field dissemination guidelines.

2-13. Range Control

Range Control will, as directed by the Senior Mission Commander, disseminate an advisory heat category via FM 30.45 to training units for unit awareness and planning purposes.

Chapter 3
Robert Gray Army Airfield (RGAAF) Weather Station (3d Weather Squadron [3 WS] Weather Operations Center [WOC])

3-1. Duty priorities

The following is a list of prioritized duties performed by weather technician(s) at the RGAAF Weather Station. Individuals may alter these priorities if the situation warrants, particularly if imminent danger to life and property is expected to occur.

a. Perform emergency war order (EWO) tasking(s).
b. Execute emergency weather station and/or facility evacuation.
c. Respond to aircraft and/or ground emergencies.
d. Respond to PMSV contacts.
e. Take and disseminate surface weather observations.

f. Provide “eyes forward” and collaborate with Operational Weather Squadron (OWS).

g. Perform severe weather action procedures (SWAP).

h. Perform mission execution forecast process (MEFP) – produce and disseminate forecasts.

i. Relay urgent PIREPs to OWS.

j. Disseminate PIREPs.

k. Perform mission watch activities.

l. Provide other briefings.

m. Perform weather function training.

n. Accomplish administrative tasks.

3-2. Airfield weather observations

a. RGAAF.

(1) The 3 WS provides manual, hourly (METAR) weather observations for RGAAF 24 hours a day, 7 days a week and ensures special observations (SPECI or LOCAL) are made when significant changes or occurrences are observed.

(2) The official observation point at RGAAF is at the mid-point of the concrete sidewalk extension adjacent to Building 90029 (Airfield Operations) on the runway side of the building. Weather technicians must first contact the tower to gain approval to precede to the end of the sidewalk toward the taxiway if they wish to better evaluate visibility. This location has a 360-degree view of the airfield complex, but hills, airfield buildings and/or hangars, and slope of the runway to the south through the northwest restrict view of the sky and/or horizon and horizontal visibility in those directions. In addition, glare from medium and high intensity lights surrounding Building 90029 may limit the ability to make accurate reports of sky conditions at night.

(3) RGAAF weather technicians conduct a basic weather watch (BWW). Weather technicians cannot monitor the weather continuously due to other operational duties. As a result, weather personnel may not detect and report all weather changes as they occur, so the BWW program IAW AFMAN 15-111 has been implemented to establish the minimum requirements needed to ensure the proper level of weather watch is maintained to ensure flight safety.

b. HAAF.

(1) Weather observations at HAAF are fully automated via the ASOS. METAR and SPECI for significant changes or occurrences are automatically and continuously disseminated into the military and national weather networks.

(2) There are inherit limitations with the ASOS at HAAF especially during rapidly changing weather conditions when some delay in reporting cloud ceilings and visibilities may occur.

(3) To ensure flight safety weather technicians and ATC tower personnel must work together to maintain situational awareness of current weather conditions and the ASOS observation. Under certain conditions, weather technicians are required to augment the HLR ASOS. The two augmentation processed used are supplementing and back-up. Supplementing is a method of manually adding meteorological information to an automated observation that is beyond the capabilities of the ASOS to detect and/or report. Back-up is the method of manually providing meteorological data and/or dissemination to the ASOS when the primary automated method is not operational or unavailable due to sensor and/pr communication failure.

(a) Weather technicians will back-up the HLR ASOS from the HAAF tower if it becomes fully inoperative or the wind sensor becomes inoperative due to sensor and/or communication failure during normal Hood Airfield operating hours.

(b) Weather technicians will back-up the HLR ASOS from the HAAF tower if the ceiling or visibility sensors become inoperative during normal Hood Airfield operating hours and weather conditions are/or forecast within 2 hours to be IFR (ceiling < 1000 feet and/or visibility < 3 statute miles [SM]) or in the weather technician's judgment the data is unrepresentative of current conditions.

c. SPECI and/or LOCAL criteria. Criteria for reporting significant changes or occurrences (SPECI and LOCAL observations) are listed in appendix C.

d. CWW Program.

(1) AFMAN 15-111 requires Air Force weather units to establish a CWW program with ATC and other appropriate base and/or post agencies. Furthermore, FAA Order 7110.65 requires certified control tower personnel to report the occurrence of previously unreported weather conditions that could affect flight safety or efficiency of other local operations and resources to the weather technician. Because the weather technician cannot view the full runway complex during a BWW, information derived from the CWW significantly enhances the quality of weather observations.

(2) Certified ATC tower personnel will forward sector visibility and tower visibility observations to the duty weather technician whenever the tower's prevailing visibility is less than 4 miles. They are also to notify the weather technician when observed tower prevailing visibility decreases to less than 4 miles, or increases to or exceed 4 miles.

(3) Weather personnel will notify the tower as soon as possible, whenever the prevailing visibility at the weather unit's observation point decreases to less than or increases to equal or exceed 4 miles. The weather technician will re-evaluate surface prevailing or sector visibility, as soon as practical, upon initial receipt of a differing control tower value and upon receipt of subsequent reportable changes at the control tower level. Tower visibility can be included as a remark in manual observations or during back up of automated observations.

(4) ATC personnel will also forward local PIREPs and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources.

(5) Weather technicians will reevaluate weather conditions whenever a reliable source (ATC, pilots, law enforcement, etc) report different conditions from the last disseminated observation.

3-3. Weather forecast support

a. Overview.

(1) The RGAAF Weather Station is manned 24 hours a day, 7 days a week to provide weather support to Fort Hood garrison operations and airfield operations at RGAAF and HAAF. There are normally two weather technicians on duty from 0700-1600, Monday through Friday. From 1600-0700, Monday through Friday and weekends and holidays (including training holidays), one weather technician is normally on duty. 3 WS weather technician(s) accomplish tasks IAW the duty priorities list in paragraph 3-1 of this regulation. Additionally, 3 WS Plans is available to provide staff weather support for exercises and worldwide contingencies.

(2) Mission execution forecast (MEF). The MEF is any product a weather technician provides to their supported Army unit for the execution of a military operation. The weather technician continuously integrates weather data from numerous DOD, civilian and commercial sources to produce weather products that are tailored to specific parameters and thresholds of each weapon(s) platform employed. This enables the weather technician to identify hazards associated with mission-limiting weather and offer Army decision makers or aircrews alternative routes or timelines that will reduce, mitigate or eliminate the risk and enable mission accomplishment. The Department of Defense (DD) 175-1 (Flight Weather Briefing), 3 WS MEF, and verbal local flight weather briefings are the primary MEFs produced by the RGAAF Weather Station.

(3) Mission watch. Weather technicians will use operational risk management (ORM) to mission watch for missions. Technicians will continuously monitor Fort Hood and WTA mission routes and training areas using real and/or near-real time weather information focusing on mission-limiting thresholds contained in, but not limited to those listed in table H-1.

(4) Weather updates for weather parameters that cross mission-limiting thresholds not originally forecast and/or briefed will be passed to aircrews via ARAC and/or flight following. Weather personnel will also monitor local area observational and forecast products as often as necessary to keep abreast of changes expected to affect the local flying area as defined in Fort Hood Regulation 95-1.

b. TAF.

(1) The 26 OWS produces the TAF for RGAAF IAW AFMAN 15-124 (Meteorological Codes) using the international civil aviation organization (ICAO) identifier "KGRK." The TAF is issued every 8 hours. Unless otherwise specified, forecast elements in the main body of the TAF apply to the area within a 5 statute mile radius of RGAAF. The 26 OWS disseminates the TAF via standard weather communication systems into the international weather information network. The TAF will also be available via the 26 OWS and 3 WS websites. There is no TAF produced for HAAF.

(2) Individual elements in the TAF will be forecast as accurately as the state of the art allows. As a minimum, the TAF will specify time of occurrence to the nearest hour (and minute as appropriate), the duration and intensity of the standard USAF TAF amendment criteria in AFMAN 15-129, and will be amended for the standard criteria and conditions listed in AFMAN 15-129.

(3) In the event of an interruption in weather operations at the 26 OWS, 3 WS will assume TAF responsibility for RGAAF until the 26 OWS resumes normal operations.

c. MEF format, delivery method, and timing.

(1) Requests for flight weather briefings can be made in person, by phone, via fax, or e-mail (hood.3asog3 WS.woc@us.army.mil) 24 hours a day, 7 days a week. Units requiring information in support of exercises or deployments must contact 3 WS Plans for coordination.

(2) Flight weather briefings and updates to briefings will only be provided to the "pilot of record" recorded on the aircrew's flight plan.

(3) Flight weather briefings are annotated on a DD Form 175-1 or on a local weather briefing log (local flights) as requested by the aviator and IAW Fort Hood Regulation 95-1. All flight briefings will contain take-off weather, en-route weather and/or hazards and destination weather.

(4) The DD Form 175-1 will normally be returned to the aircrew via fax or e-mail. The electronic DD Form 175-1 will <u>not</u> contain a briefing time, void time or the initials of the weather technician. The pilot must call back after receipt of the DD Form 175-1 to complete the briefing process. Only then will the weather technician provide the brief time, void time, and his or her initials. The DD Form 175-1 will <u>not</u> be considered complete without these times and initials. If the aircrew does <u>not</u> have access to a fax or e-mail, the DD Form 175-1 will be briefed verbally over the phone.

(5) "Local" verbal briefings will be documented by the weather technician on the 3 WS aircrew briefing log, to include the aircraft type, last 3 numbers of the aircraft tail number or call sign, take-off and/or landing times, 3 WS MEF number and revision (if applicable), significant changes to the 3 WS MEF briefed, weather watches, warnings, and/or advisories, brief time, void time, forecaster's initials, and the pilot's initials.

(6) Transient aircrews. The 3 WS may provide weather briefings or updates to existing briefings for transient aircrews at RGAAF or HAAF as time and resources allow. If 3 WS is unable to provide a briefing, the aircrew must contact the 26 OWS briefing cell.

(a) Transient aircrews must request weather briefings with a minimum of 2 hours lead time to give the OWS adequate time to examine weather conditions and complete required documentation. The 26 OWS will complete no-notice and/or short-notice weather briefings as time permits depending on current workload, available manpower and duty priorities. No-notice flight weather briefings will be prioritized behind existing requests unless special circumstances warrant a higher priority (i.e., alert, search and rescue, medical evacuation, etc.).

(b) The 26 OWS will provide flight weather briefing services to transient aircrews upon request via phone, fax or the 26 OWS flight brief scheduling system accessible through the 26 OWS website at https://ows.barksdale.af.mil/. See appendix K for the 26 OWS briefing cell and fax numbers.

d. 3 WS MEF (see appendix G).

(1) This product is produced 24 hours a day, 7 days a week every 8 hours and will be posted to the 3 WS website at http://www.hood.army.mil/3 WS/, normally by 00 Zulu time (Z), 08Z and 16Z. The 3 WS MEF is designed to incorporate the needs of most Fort Hood missions into a single product for mission planning of flight operations within the local flying area, specifically Fort Hood reservation (to include RGAAF and HAAF), test flight areas III and V, and the primary east and/or west routes within the WTA. In addition, the 3 WS MEF will be used for mission execution of most local flights operating on Fort Hood reservation, and test flight areas III and V. The valid time of each 3 WS MEF will be 12 hours; updated every 8 hours. The 3 WS MEF will be amended (updated) when the criteria below is observed in the Fort Hood reservation or test flight areas III and V and was <u>not</u> forecast.

(a) Ceiling less than 3000 feet, 1000 feet, and/or visibility less than 3 miles.

(b) Ceiling less than 500 feet and/or visibility less than ½ mile.

(c) Thunderstorms.

(d) Moderate or greater turbulence (based on CAT II aircraft).

(e) Moderate or greater icing.

(2) Aircrews are highly encouraged to provide positive and negative feedback to the RGAAF Weather Station on the quality and/or accuracy of their forecasts. Aircrews can simply complete the feedback form provided with the faxed and/or emailed brief and fax to the RGAAF Weather Station (see appendix K for fax number) or via email by clicking on the mailbox feedback icon on the MEF found on the 3 WS home page. Feedback is critical to ensure Army decision makers and aircrews have accurate and timely weather intelligence to reduce, mitigate or eliminate the risk and enable mission

accomplishment. Forecasting is a circular process, much like ORM, and weather technicians must continually evaluate their process to improve the quality of the products provided. Metrics of weather station performance are posted monthly on the 3 WS website.

e. PMSV.

(1) The PMSV at RGAAF is monitored continuously 24 hours a day, 7 days a week on 306.5 UHF and 41.2 FM. This service allows aircrews to receive current and forecast weather conditions, as well as updates to flight weather briefings. Aviators are strongly encouraged to relay PIREPs via the PMSV. Reports from airborne aircraft are one of the most important sources of current weather information and contribute greatly to improving meteorological support for Army aviation operations.

(2) During PMSV outages or RGAAF Weather Station evacuation, the RGAAF tower will, as their duties permit, monitor the PMSV frequencies and pass contact information to the RGAAF Weather Station (or alternate location). Local dissemination of PIREPs significant to flying operations and flight safety will be transmitted via N-TFS as per example in appendix F. During extended PMSV outages, a NOTAM will be disseminated by RGAAF Airfield Operations to highlight the unavailability of PMSV service.

f. Tactical decision aids (TDA). Requests for TDA support (i.e., electro-optical [E-O] forecasts) must be made through 3 WS Weather Plans. Requests should be made 24 hours in advance. The 3 WS Weather Plans can provide software and training that aircrews can use to generate their own mission specific E-O products.

g. Periodic flight safety briefings. Requests for semi-annual or other periodic flight safety briefings must be made through 3 WS Weather Plans. Units must request briefings at least fourteen (14) working days in advance of the briefing date.

h. Space weather information. Space weather products are available from the Air Force Weather Agency (AFWA) through the 3 WS website or the 26 OWS website. 3 WS personnel will utilize these and other products to determine the current state of the space environment, as well as impacts to high frequency (HF), and UHF communications and single frequency global positioning systems (GPS). Satellite data and communications systems are particularly sensitive to space weather phenomena, as a result, during significant space weather events, some military systems and/or operations may experience a decreased capability.

i. Climatological support.

(1) Climatological data for RGAAF is posted on the 3 WS website.

(2) Climatological support for any location worldwide can be provided by the Weather Plans Flight or go to the Air Force Combat Climatology Center (AFCCC) website at https://notus2.afccc.af.mil/SCIS/. Data can be tailored to specific needs (i.e. the percent of time the visibility is reduced by haze or smoke at Casablanca, Morocco in

June during afternoon hours). Depending on the complexity of the request, the data can be available within a few hours or up to a week.

j. Hurricane procedures.

(1) The National Hurricane Center (NHC) issues official forecasts for tropical storms and hurricanes. 3 WS personnel will not deviate from the official forecast position, track, movement, maximum wind speed, or intensity trend. The 26 OWS will serve as primary liaison between NHC and 3 WS.

(2) All forecasts will be available through the 26 OWS website or directly from NHC. Locally produced products (i.e., briefing slides) may be made available on the 3 WS website as the situation requires. Forecast outlooks of 48 hours or beyond contain a high degree of uncertainty, are for planning purposes only, and are subject to change.

(3) The 3 WS Weather Plans Flight will provide daily tropical storm forecasts to the III Corps CoC and USARNORTH Division West throughout hurricane season. Additional briefing support will be provided upon request and/or as the potential impact scenario warrants.

3-4. Weather watches and warnings

a. The 26 OWS in coordination with the RGAAF Weather Station is responsible for the resource protection of the Fort Hood reservation, to include RGAAF and HAAF. The 26 OWS will issue all forecast weather watches and warnings for the Fort Hood reservation. The RGAAF Weather Station will issue the observed warning for lightning. See appendix D for Fort Hood weather watch and warning criteria.

b. In rare circumstances, 3 WS forecasters may issue warnings for forecast phenomena when imminent weather conditions pose a hazard to life and property and notification to the 26 OWS is not possible. The 3 WS will be responsible for local dissemination of the warning and will contact the 26 OWS as soon as possible after local dissemination.

c. The 26 OWS will disseminate weather watches and/or warnings to 3 WS and Fort Hood agencies via the integrated weather warning capability (IWWC) system. The 26 OWS will initiate a phone call to the 3 WS and IOC when a 26 OWS issued weather watch and/or warning has not received a successful confirmation within IWWC. The 3 WS will disseminate weather watches and/or warnings as required via the N-TFS-JET.

d. In case of an IWWC and/or N-TFS-JET outage, the 26 OWS and/or 3 WS weather technicians will use telephone notification to disseminate weather watches and/or warnings to the IOC, ARAC, RGAAF tower, RGAAF Airfield Operations, and HAAF tower (when open).

e. SWAP.

(1) The RGAAF Weather Station is manned with at least one certified weather technician 24 hours a day, 7 days a week, but additional personnel will be recalled

during potential and/or actual severe weather events. For the purpose of these procedures, severe weather is defined as tornadoes, funnel clouds, winds ≥ 50 knots, and/or hail ≥ ¾ inch. It is imperative that timely and accurate weather watches, warnings, and advisories are disseminated to all Fort Hood agencies to aid in the protection of personnel and resources.

(2) The RGAAF Weather Station will maintain procedures to conduct expanded "Eyes Forward" and enhanced *MissionWatch* to enable forecasters to focus activities and allocate resources to exploit weather conditions, mitigate mission delays, and enhance overall effectiveness of operations.

(3) Upon activation of SWAP, the forecasters will divide duties to ensure a heightened watch over the weather situation and to enhance interaction with supported units and the 26 OWS.

3-5. Weather advisories

a. The RGAAF Weather Station will issue all observed weather advisories for the Fort Hood reservation, local flying area and the WTA. See appendix E for Fort Hood weather advisory criteria.

b. The RGAAF Weather Station will disseminate weather advisories for Fort Hood agencies via the N-TFS-JET. During N-TFS-JET outages, 3 WS weather technicians will use telephone notification to disseminate weather advisories to the IOC, ARAC, RGAAF tower, RGAAF Airfield Operations, and HAAF tower (when open).

3-6. Dissemination of weather information and/or products

a. The 26 OWS and the RGAAF Weather Station disseminates weather information through the N-TFS-JET. The N-TFS-JET is connected to the post local area network (LAN) and is the primary system for disseminating weather information (i.e., RGAAF weather observations [KGRK]), forecasts, weather watches, warnings, advisories, and pilot reports) to Fort Hood agencies. "Fort Hood Current Conditions" to include weather watches, warnings and advisories can be viewed via the N-TFS link on the 3 WS website at http://www.hood.army.mil/3 WS/ or the 26 OWS website at https://ows.barksdale.af.mil/.

b. The IOC will further disseminate weather watches, warnings and advisories to subordinate units via telephone. Units assigned or attached to Fort Hood will establish procedures to ensure timely dissemination of weather information to subordinate personnel and units through the IOC. The IOC maintains the Fort Hood prioritized severe weather notification checklist (see appendix B).

c. If the N-TFS-JET is inoperative, the 26 OWS will disseminate forecast weather watches and warnings via telephone to the IOC. The RGAAF Weather Station will disseminate all weather watches and warnings via telephone to the ARAC, RGAAF tower, RGAAF Airfield Operations, and HAAF tower (when open).

d. During N-TFS-JET outages, the RGAAF Weather Station will also disseminate all observed weather advisories via telephone to the above agencies and to the IOC. In addition, the RGAAF Weather Station will disseminate via telephone all KGRK weather observations first to RGAAF tower and ARAC then to any other requesting agency.

e. If weather operations at the 26 OWS are interrupted (i.e., power outage, weather communication system outage, etc.), the 26 OWS will transfer forecast weather watch and warning support for Fort Hood to the RGAAF Weather Station until communication is restored.

3-7. Evacuation of weather station facilities

a. It could become necessary for weather technician(s) to evacuate the RGAAF Weather Station, Building 90029, to an alternate operating location (AOL) for actual emergencies (i.e., toxic spill, bomb threat or natural disaster). The weather technician(s) will not evacuate for exercises. When evacuation is necessary, the weather technician(s) will relocate to Building 90041, room 212. See appendix K for 3 WS alternate facility telephone number.

b. The weather technician will contact the IOC, RGAAF tower, ARAC, and HAAF tower (when open) either prior to evacuation (if time permits) or immediately upon arrival at the AOL, and will provide alternate contact phone number(s) and e-mail address if possible. Since RGAAF Operations will likely relocate in such emergencies, the weather technician will coordinate with RGAAF Operations during evacuation.

c. All possible means will be implemented to provide uninterrupted weather support to Fort Hood agencies, but some limitations will likely occur:

(1) Aircrew briefing services may be delayed or temporarily unavailable.

(2) PMSV will not be available at the evacuation site. The RGAAF tower will, as their duties permit, monitor the PMSV frequencies and pass contact information to the weather technician at the AOL.

(3) Weather technicians will have a limited view of the horizon due to obstructions of buildings and/or hangars in the immediate vicinity of the AOL that could limit estimations of surface visibility and sky condition. In addition, ceiling heights, wind direction and speed, and altimeter readings may have to be estimated if the ASOS on the airfield is not operational.

d. Weather observation support will resume upon arrival at the AOL. The primary airfield sensors will continue to be used, but if not available, observations will be taken using backup equipment.

e. Weather watch, warning, and advisory support will continue as normal from the AOL. Telephone dissemination procedures will be used as required.

f. Forecasting services, including MissionWatch, DD Form 175-1, verbal briefings, the 3 WS MEF, and the 5-day forecast will continue to the extent that

communications will allow. Calls to the RGAAF Weather Station will be call forwarded to the AOL phone numbers if possible.

g. Upon termination of the AOL operations, weather technicians will return to the RGAAF Weather Station, transmit an observation as soon as possible upon arrival, notify affected agencies, and resume normal weather operations at the airfield.

Chapter 4
Weather Plans Flight

4-1. Staff weather support

a. The Weather Plans Flight provides staff weather services Monday through Friday (except federal holidays) from 0730 to 1630 for III Corps, 1CD, 4CAB, 3ACR, and 21CAV. For after hours and emergency and/or crisis response, contact the RGAAF Weather Station 24 hours a day, 7 days a week. See appendix J for 3 WS telephone numbers.

b. The Weather Plans Flight is designed to integrate weather intelligence data into Army mission planning and execution of ground and aviation training and combat operations for III Corps, 1CD, 1ACB, 4CAB, 3ACR, and 21CAV.

c. The Weather Plans officer in charge (OICs) and/or noncommissioned officer in charge (NCOICs) are members of the supported Commanders' special staff and work in coordination with the G2s and S2s. Each OIC and/or NCOIC coordinates directly with the supported Commander and advises them on weather intelligence matters, including exploitation of weather to enhance combat power.

d. Weather technicians are assigned to provide direct support to corps, division and aviation brigade headquarters (HQ) staff, and Tactical Operation Centers (TOCs). All other Army units and echelons will receive weather support via reach back capabilities.

e. In the field, BWFs will only perform weather duties and/or services as directed by their Air Force chain of command.

f. BWFs only deploy to support corps, division, and aviation brigade exercises or contingencies as directed by the 3 WS Commander.

g. Tactical weather support generally parallels support provided in garrison.

h. Supported command tactical SOPs and instructions contain specific procedures for tactical weather support that are unique to each weather team.

i. Weather support to tactical operations is communications-dependent. Weather services can be seriously degraded during periods of limited communications capability. If tactical units are unable to communicate with their BWF while deployed during exercises or contingencies, tactical units should contact the BWF at the next higher echelon.

j. The Weather Plans Flight will:

(1) Provide weather briefings for safety, seasonal training, pre-deployment, large aircraft movements, climatology, etc. upon request. These requests should be coordinated as far in advance as possible.

(2) Monitor space weather products and notify supported units when conditions may impact military operations.

(3) Prepare and review weather annexes to plans and orders of the supported unit.

(4) Provide or arrange for climatological studies and analyses in support of planned exercises, operations and commitments.

(5) Develop specific weather support procedures to provide or arrange for the dissemination of weather information to supported unit(s) such as weather observations, terminal or area forecasts, flight weather briefings, etc. or the integration of weather information into the supported units' command and control system(s).

(6) Provide meteorological data as needed to support chemical monitoring and detection.

(7) Assist aircraft accident investigation boards, when requested.

(8) Train Army personnel to use and understand weather information.

k. Weather support for the National Training Center (NTC) is IAW Forces Command (FORSCOM) Regulation 350-50-1 (Training at the National Training Center), appendix D.

l. Weather support for the Joint Readiness Training Center (JRTC) is IAW FORSCOM Regulation 350-50-2 (Training at the Joint Readiness Training Center), appendix W.

m. E-O support. Requests for E-O forecasts must be made through the Weather Plans Flight. Requests should be made at least 24 hours in advance. The Weather Plans Flight can provide software and training aircrews can use to generate their own mission specific E-O products.

Appendix A
References

Section I
Required Publications

AFI 15-128
Air and Space Weather Operations-Roles and Responsibilities (Cited in paras 1-1 and 1-5)

AFI 35-101
Public Affairs Policies and Procedures (Cited in para 2-4i)

AFMAN 15-111
Surface Weather Observations (Cited in paras 2-4a, 2-4f, 2-8f(5)(b), 3-2a(3), 3-2b(3)(a), 3-2d(1), 3-4e(2), and appendix C)

AFMAN 15-124
Meteorological Codes (Cited in para 3-3b(1)

AFMAN 15-129
Air and Space Weather Operations-Processes and Procedures (Cited in paras 1-1, 1-5, 2-4a, 2-4b, 3-3b(2), and 3-4e(1)

AR 95-1
Flight Regulations (Cited in appendix C and H)

AR 115-10
Weather Support for the US Army {AFI 15-157 (IP)} (Cited in paras 1-1, 2-2a, 2-3a, 2-5a, 2-7a, and 2-12)

FAA Order 7110.65
Air Traffic Control (Cited in paras 2-4f and 3-2d(1)

Field Manual 34-81
Weather Support for Army Tactical Operations {AFM 105-4} (Cited in appendix I)

FH Reg 95-1
Fort Hood Local Flying Rules (Cited in paras 2-8(e)(1), 3-3a(3)(f), 3-3c(3), and appendix H)

Flight Information Publication (Cited in paras 2-8d(2), 2-8d(3) and appendix C)

FORSCOM Reg 350-50-1
Training at the National Training Center (Cited in para 4-1k)

FORSCOM Reg 350-50-2
Training at the Joint Readiness Training Center (Cited in para 4-1l)

JP 3-59
Joint Doctrine, Tactics, Techniques, and Procedures for Meteorological and Oceanographic Operations (Cited in appendix I)

Section II
Related Publications

AFI 10-229
Responding to Severe Weather Events

Memorandum of Agreement 15-24

Section III
Prescribed Forms

DD Form 175-1
Flight Weather Briefing (Prescribed in paras 3-3a(2), 3-3c(3), 3-3c(4), and 3-7f)

Section IV
Referenced Forms

FH Form 1853
Distribution Scheme

DA Form 2028
Recommended Changes to Publications and Blank Forms

Appendix B
Fort Hood Weather Notification Pyramid

All weather watches, warnings and advisories are disseminated to Fort Hood units and staffs according to the notification pyramid maintained and updated by the IOC. An example of a notification pyramid is below.

Note: When notified of a tornado warning for the Fort Hood reservation, the emergency broadcast system sirens and Channel 10 voice-over will be activated by the IOC.

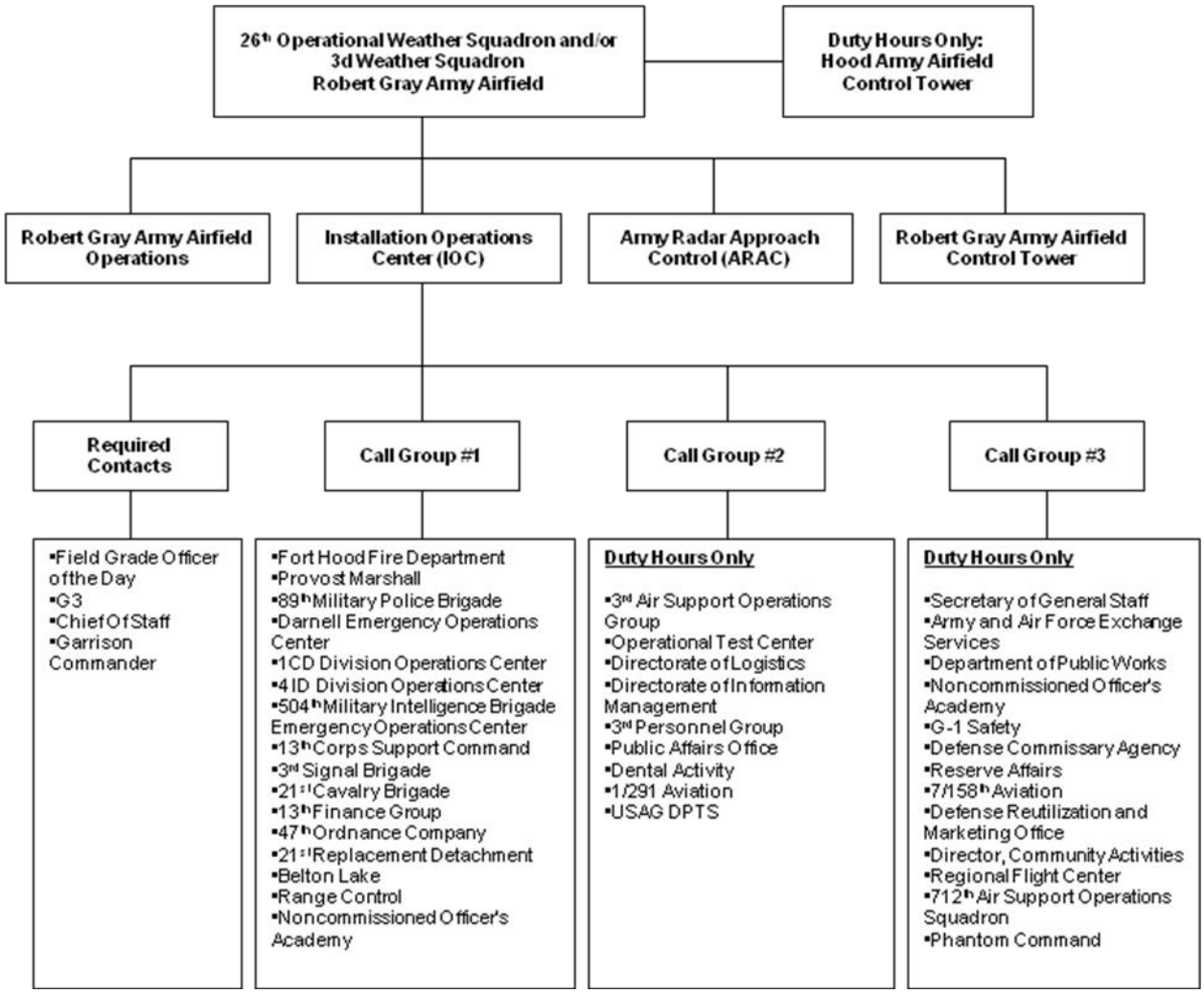

Figure B-1. Example of Fort Hood weather pyramid

Appendix C
Robert Gray Army Airfield (RGAAF) and Hood Army Airfield (HAAF) Special (SPECI) and LOCAL Weather Observation Criteria

a. References. AFMAN 15-111, FLIP and AR 95-1 (Flight Regulations).

b. SPECI weather observation criteria.

(1) Visibility. Surface visibility (statute miles) as reported in the body of the report decreases to less than, or if below, increases to equal or exceed:

Table C-1. Visibility

Robert Gray Army Airfield	Hood Army Airfield
3 miles	3 miles
2 ½ miles	2 miles
2 ¼ miles	1 mile
2 miles	¾ mile
1 ¾ miles	½ mile
1 ½ miles	
1 ¼ miles	
1 mile	
¾ mile	
½ mile	
¼ mile	

(2) Ceiling. The ceiling (rounded off to reportable values) forms or dissipates below, decrease to less than, or if below, increases to equal or exceed:

Table C-2. Ceiling

Robert Gray Army Airfield	Hood Army Airfield
3,000 feet AGL	3,000 feet AGL
1,500 feet AGL	1,500 feet AGL
1,000 feet AGL	1,000 feet AGL
800 feet AGL	700 feet AGL
700 feet AGL	500 feet AGL
600 feet AGL	
500 feet AGL	
400 feet AGL	
300 feet AGL	
200 feet AGL	

Legend for Table C-2:
AGL – above ground level

(3) Sky condition. A layer of clouds or obscuring phenomena aloft is observed below 800 feet above ground level (AGL) (700 feet AGL for HAAF) and no layer aloft was reported below 800 feet AGL (700 feet AGL for HAAF) in the previous METAR or SPECI.

(4) Wind shift. Wind direction change by 45 degrees or more in less than 15 minutes and the wind speed is 10 knots or more throughout the wind shift.

(5) Squall. When squalls occur (a strong wind characterized by a sudden onset, a duration on the order of minutes, and a rather sudden decrease in speed) in which the wind speed increases at least 16 knots and is sustained at 22 knots or more for at least one minute.

(6) Volcanic eruption. Eruption or volcanic ash cloud is first noted.

(7) Thunderstorm (occurring at the station). A SPECI is not required to report the beginning of a new thunderstorm if one is currently reported.

(a) Thunderstorm begins.

(b) Thunderstorm ends.

(8) Precipitation. Except for freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type (i.e., drizzle changing to snow grains) or the beginning or ending of one type while another is in progress (i.e., snow changing to rain and snow).

(a) Hail begins or ends.

(b) Freezing precipitation begins, ends or changes in intensity.

(c) Ice pellets begin, end or change in intensity.

(d) Any other type of precipitation begins or ends.

(9) Tornado, funnel cloud or water spout. If a tornado, funnel cloud, or water spout:

(a) Is observed.

(b) Disappears from sight or ends.

(10) Runway visual range (RVR). For RGAAF only. HAAF does not have RVR capability.

(a) Prevailing visibility is observed to be 1 SM or less and/or the RVR for active runway is observed to be 6,000 feet or less.

(b) Prevailing visibility first observed $\leq$ 1 SM.

(c) Prevailing visibility goes above 1 SM.

(d) RVR for active runway decreases to less than or, if below, increases to equal or exceed:

Table C-3. Runway visual range

Robert Gray Army Airfield
6,000 feet
5,000 feet
4,000 feet
2,400 feet
2,000 feet

(e) RVR is first determined as unavailable (RVRNO) for the active runway, and when it is first determined the RVRNO report is no longer applicable, provided conditions for reporting RVR exist.

(11) Upon resumption of observing functions. A SPECI observation will be taken within 15 minutes after the weather technician returns to duty following a break in observing coverage or augmentation at the observing location unless a METAR observation is filed during that 15 minute period.

(12) Criteria established locally. Weather flights will take a SPECI for any criteria significant to local installation operations. These criteria will be coordinated with base agencies and specified in this document.

(13) Aircraft mishap. Take an aircraft mishap SPECI immediately following notification or sighting of an aircraft mishap at or near the observing location unless there has been an intervening observation.

(14) Miscellaneous. Any other meteorological situation that in the weather technician's opinion is critical to the safety of aircraft operations.

c. LOCAL weather observation criteria. LOCAL observations will be taken at manual weather stations only such as RGAAF and only at automated locations such as HAAF during back-up of the automated sensor.

(1) Altimeter setting (ALSTG). LOCAL ALSTG observations will be taken at an interval not to exceed 35 minutes when there has been a change of 0.01 inch mercury (Hg) (0.3 hectopascals [hPa]) or more since the last locally disseminated ALSTG value. A METAR or SPECI taken within the established time interval will meet this requirement or the observation may be taken and disseminated as a "single element" LOCAL.

(2) Miscellaneous. Any other meteorological situation that in the weather technician's opinion is significant to local operations.

Appendix D
Fort Hood Weather Watch and Warning Criteria

a. Weather watch and warning criteria were established based on supported unit supplied critical weather elements and Air Force directives.

b. The weather watch can be thought of as a “heads up,” at which time agencies need to consider implementing required protective actions should a subsequent weather warning be issued. Watches normally precede a weather warning.

c. Each watch and warning will be numbered by month and then sequentially (i.e., 02-008 would be the eighth weather watch and warning issued for the month of February).

d. Weather warnings will be cancelled when the warning criteria is no longer occurring. Weather watches will be cancelled when the potential for the watch criteria no longer exists.

e. Weather warnings may be extended, providing nothing changes except the duration. Extensions will be issued prior to the expiration of the original weather warning.

f. The 26 OWS will issue a forecast weather watch and warning when criteria in Table D-1 occur or are expected to occur. Watches and warnings will be issued for the entire Fort Hood reservation, to include RGAAF and HAAF. *Exception*: Lightning warnings issued by 3 WS can be issued for the entire Fort Hood reservation, to include RGAAF and HAAF or can be issued just for RGAAF and/or HAAF. The text of the warning will define the specific aerial coverage.

Table D-1. Forecast weather watches and warnings

Criteria	Watch Desired Lead-time	Warning Desired Lead-time
Tornadoes	As potential warrants	30 minutes prior to occurrence
Damaging wind (wind greater than or equal to 50 knots) [1]	As potential warrants	2 hours prior to occurrence
High wind (wind greater than or equal to 35 knots and less than 50 knots) [1]	N/A – Watch not required	1 ½ hours prior to occurrence
Hail (greater than or equal to 1/2 inch to less than 3/4 inch diameter) [1]	N/A – Watch not required	1 ½ hours prior to occurrence
Hail (greater than or equal to 3/4 inch diameter) [1]	As potential warrants	2 hours prior to occurrence
Heavy rain or snow (greater than or equal to 2 inches in 12 hours)	As potential warrants	1 ½ hours prior to occurrence
Freezing precipitation	As potential warrants	1 ½ hours prior to occurrence
Blizzard conditions (Falling and/or blowing snow and visibility less than or equal to ¼ mile and wind greater than or equal to 30 knots lasting more than 3 hours)	As potential warrants	1 1/2 hours prior to occurrence
Lightning within 5 NM of Fort Hood reservation (implies thunderstorms within 10 NM)	30 minutes prior to start of thunderstorm	N/A – Issued by 3 WS when lightning is observed
Thunderstorms in the WTA[2]	2 hours prior to occurrence – Issued by 3 WS	N/A – Issued by 3 WS when thunderstorm is observed

Legend for Table D-1:

N/A – not applicable
NM – nautical mile
WTA – western training area
3 WS – 3d Weather Squadron

Note:

[1] Warnings will specify maximum wind speed or hail size expected.

[2] The WTA may be subdivided along the 55 military grid reference system (MGRS) line (an east-west line) and by a north-south line to divide it into four separate areas. The four areas are the northeast, the southeast, the southwest, and the northwest. The WTA thunderstorm advisory may be issued for any geographic area or the entire area. The text of the watch or warning will define area coverage. *Note*: Due to geographic location and customer needs, it has been determined Fort Hood does not require watches for sandstorms. In addition, Fort Hood does not require a weather watch for hail ½ inch to less than ¾ inch in diameter.

Appendix E
Fort Hood Weather Advisory Criteria

a. Weather advisories were established based on supported unit supplied critical weather elements that will impact operations. Criteria may change as operational requirements change.

b. Each advisory will be numbered by month and then sequentially (i.e., 02-008 would be the eighth weather advisory issued for the month of February).

c. All 3 WS issued weather advisories are observed advisories, meaning when the condition is observed by Doppler weather radar, lightning detection system, airfield weather sensors, or PIREPs, the advisory will be issued. It will be valid "Until Further Notice" and it will be cancelled when the condition is no longer occurring.

d. Observed weather advisories are divided into area advisories or terminal advisories. The specific geographic area for each product is defined in the table below.

e. The 3 WS will issue observed weather advisories when criteria below occur and for the area coverage indicated.

Table E-1. Observed weather advisories

Area Weather Advisories	
Criteria	**Desired Lead-time**
Low-level wind shear below 2,000 feet AGL w/i 50 NM of Fort Hood (not associated with thunderstorms)	None—Issued when condition occurs
Moderate or greater icing below 10,000 feet AGL w/i 50 NM of Fort Hood (not associated with thunderstorms)	None—Issued when condition occurs
Moderate or greater turbulence below 10,000 feet AGL w/i 50 NM of Fort Hood (not associated with thunderstorms)	None—Issued when condition occurs
Wind chill temperature less than or equal to 10F Fort Hood reservation	None—Issued when condition occurs
Terminal Weather Advisories (w/i 5 NM of RGAAF and HAAF)	
Surface wind greater than or equal to 30 knots	None—Issued when condition occurs
Instantaneous gust spread greater than or equal to 15 knots	None—Issued when condition occurs

Legend for Table E-1:

AGL – above ground level
F – Fahrenheit
HAAF – Hood Army Airfield
NM – nautical mile
RGAAF – Robert Gray Army Airfield
W/I - within

Appendix F
Weather Product Dissemination – New Tactical Forecast System (N-TFS) – Joint Environmental Toolkit (JET)

Table F-1. Example of weather product dissemination – New Tactical Forecast System (N-TFS) – Joint Environmental Toolkit (JET)

Product	Example	Explanation
Weather observation	KGRK METAR 1255Z 24008KT 7 FEW035 SCT100 BKN250 29/22 ALSTG 30.17 RMK CB DSNT NW MOV SW PA +800 DA +2000 56/BS	• KGRK: Location identifier for RGAAF • METAR: Type of observation (may also be SPECI or LOCAL) • 1255Z: Time of observation (UTC) • 24008KT: Wind direction from 240 degrees (magnetic) at 08 knots • 7: Prevailing visibility (statute miles) • FEW035: Clouds less than 3/8th total cloud cover at 3,500 feet AGL • SCT100: Clouds 3/8 to 4/8ths total cloud cover at 10,000 feet AGL • BKN250: Clouds 5/8 to 7/8ths total cloud cover at 25,000 feet AGL • 29/22: Temperature and dew point (degrees Celsius) • ALSTG 30.17: Altimeter setting (inches of mercury) • RMK: Significant remarks - cumulonimbus (thunderstorm) distant northwest • PA +800: Pressure altitude (feet) • DA +2000: Density altitude (feet) • 56/BS: Time observation entered in N-TFS and technician's initials
TAF	KGRK FCST 1316-1416 16015KT 7 FEW030 SCT250 ALSTG30.17INS BECMG 21-22 16015G25KT 5 -SHRA BKN030 OVC250 ALSTG30.09INS LGT TURBC SFC-030 TEMPO 00-03 VRB25G35KT 1 +TSRA BKN015CB OVC030 TEMP 24C AT 2200Z TEMP 16C AT 1200Z 05/NJ	• KGRK: Location identifier for RGAAF • FCST: 24 hour forecast • 1316-1416: Forecast valid 13th 1600Z to 14th 1600Z (UTC) • 16015KT: Forecast wind direction (from) and speed (knots) • 7: Forecast prevailing visibility (statue miles) • FEW030: Clouds less than 3/8th total cloud cover at 3,000 feet AGL • SCT250: Clouds 3/8 to 4/8ths total cloud cover at 25,000 feet AGL • ALSTG30.17INS: Forecast minimum altimeter setting (inches of mercury) • BECMG 21-22: Forecast gradual change between 2100 and 2200Z • 16015G25KT: Forecast wind direction, speed and gusts (knots) • 5 -SHRA: Prevailing visibility (statue miles) in light rain showers • BKN030: Clouds 5/8 to 7/8ths total cloud cover at 3,000 feet AGL • OVC250: Clouds 8/8 total cloud cover at 25,000 feet AGL • ALSTG30.09INS: Forecast minimum altimeter setting (inches of mercury) • LGT TURBC SFC-030: Light turbulence surface - 3,000 feet AGL • TEMPO 00-03: Forecast temporary condition between 0000Z and 0300Z • VRB25G35KT: Forecast wind direction, speed and gusts (knots) • 1+TSRA: Prevailing visibility (statue miles) in thunderstorm with heavy rain • BKN015CB: Clouds 5/8 to 7/8ths total cloud cover at 1,500 feet AGL with cumulonimbus cloud (thunderstorm) • OVC030: Clouds 8/8 total cloud cover at 3,000 feet AGL • TEMP 24C AT 2200Z: Forecast maximum temperature and time • TEMP 16C AT 1200Z: Forecast minimum temperature and time • 05/NJ: Time forecast entered in N-TFS & technician's initials

Table F-1. Example of weather product dissemination – New Tactical Forecast System (N-TFS) – Joint Environmental Toolkit (JET) – Continued

Product	Example	Explanation
PIREP	KGRK PIREP TIME 1440 KGRK 360005 FL 220 TP BE20 BKN012-TOP045 WX FV99 TA -25 WV 24085KT TURB NEG IC LGT RIME RM DURC FROM KGRK	• KGRK: Location identifier for RGAAF receiving PIREP • PIREP: Pilot report • 1440: Time of PIREP (UTC) • KGRK 360005: Location of report; 5 nautical miles north of RGAAF • FL 220: Aircraft altitude - 22,000 feet MSL • BE20: Type of aircraft • BKN012-TOP045: Clouds 5/8 to 7/8ths total cloud cover at 1,200 feet MSL; tops of clouds 4,500 feet MSL • WX FV99: Flight-level visibility and weather = unrestricted visibility • TA-25: Outside air temperature at flight level • WV 24085: Flight level wind direction and speed (from 240 degrees at 85 knots) • TURBC NEG: No turbulence • IC LGT RIME : Light rime icing at flight level • RM: Remarks - DURC from KGRK (RGAAF)
Weather watch	26 OWS IWWC WEATHER WATCH FOR FORT HOOD (KGRK) #09-008 THE POTENTIAL EXISTS FOR HIGH WIND GREATER THAN OR EQUAL TO 50 KNOTS MAXIMUM EXPECTED IS 60 KNOTS VALID 02/1500Z (02/1000L) TO 02/2300Z (02/1800L). HAIL GREATER THAN OR EQUAL TO 3/4 INCH MAXIMUM EXPECTED 1 INCH VALID 02/2300Z (02/1800L). FORECASTER: DO	• 26 OWS IWWC WEATHER WATCH FOR FORT HOOD (KGRK) #09-008: Eighth weather watch issued by the 26 OWS for Fort hood for the month of September • THE POTENTIAL EXISTS FOR HIGH WIND GREATER THAN OR EQUEAL TO 50 KNOTS MAXIMUM EXPECTED IS 60 KNOTS. HAIL GREATER THAN OR EQUEAL TO 3/4 INCH MAXIMUM EXPECTED 1 INCH: Specific watch criteria • VALID 02/1500Z (02/1000L) TO 02/2300Z (02/1800L): Forecast valid time of the watch conditions for each specific criteria • FORECASTER: DO: Forecaster's initials

Table F-1. Example of weather product dissemination – New Tactical Forecast System (N-TFS) – Joint Environmental Toolkit (JET) – Continued

Product	Example	Explanation
Weather warning	26 OWS IWWC WEATHER WARNING FOR FORT HOOD (KGRK) #09-006 HIGH WIND GREATER THAN OR EQUAL TO 50 KNOTS MAXIMUM EXPECTED IS 60 KNOTS VALID 02/1800Z (02/1300L) TO 02/2100Z (02/1600L). HAIL GREATER THAN OR EQUAL TO 3/4 INCH MAXIMUM EXPECTED 1 INCH VALID 02/1800Z (02/1300L) TO 02/2100Z (02/1600L). WEATHER WATCH #09-008 REMAINS IN EFFECT. FORCASTER: RT	• 26 OWS IWWC WEATHER WARNING FOR FORT HOOD (KGRK) • #09-006: Sixth weather warning issued by the 26 OWS for Fort Hood for the month of September • HIGH WIND GREATER THAN OR EQUAL TO 50 KNOTS MAXIMUM EXPECTED IS 60 KNOTS. HAIL GREATER THAN OR EQUAL TO 3/4 INCH MAXIMUM EXPECTED 1 INCH: Specific warning criteria • VALID 09/1800Z (09/1300L) TO 09/2100Z (09/1800L): Forecast valid time of the warning conditions for each specific criteria • FORECASTER: RT: Forecaster's initials
Area weather advisory	FORT HOOD AREA WEATHER ADVISORY #10-001 VALID 03/1030Z (03/0430L) TO UFN (UFN) LOW LEVEL WIND SHEAR BELOW 2000' AGL WITHIN 50NM OF FORT HOOD FORECASTER: BS	• #10-001: First weather advisory for month of October • Valid 03/1030Z (03/0430L) TO UFN (UFN): Advisory valid until further notice (observed condition) • "LOW LEVEL WIND SHEAR BELOW 2000' AGL WITHIN 50NM OF FORT HOOD" – Specific criteria • "FORECASTER: BS" – Forecaster's initials
Terminal weather advisory	FORT HOOD TERMINAL WEATHER ADVISORY #08-003 VALID 20/1830Z (20/1330L) TO UFN (UFN) SURFACE WIND GREATER THAN OR EQUAL TO 30 KNOTS AT KGRK. FORECASTER: AB	• #08-003: Third weather advisory for month of August • Valid 20/1830Z (20/1330L) TO UFN (UFN): Advisory valid until further notice (observed condition) • "SURFACE WIND GREATER THAN OR EQUAL TO 30 KNOTS AT KGRK" – Specific criteria • "FORECASTER: AB" – Forecaster's initials

Table F-1. Example of weather product dissemination – New Tactical Forecast System (N-TFS) – Joint Environmental Toolkit (JET) – Continued

Legend for Table F-1:

AGL – above ground level coverage
ALSTG – altimeter setting
BECMG – becoming
BKN – broken (as in sky condition of 5/8ths to 7/8ths cloud coverage)
CB – Cumulonimbus
DA – density altitude
DSNT – distant
DURC – during climb
FCST – forecast
FEW – few (as in sky condition of 1/8ths to 28ths cloud coverage)
FL – flight level
FV – flight level visibility
IC – icing
IN – inches
IWWC – integrated weather warning capability
KGRK – ICAO locator for Robert Gray Army Airfield
KT – knots
L – local time
LGT – light
METAR – aviation routine weather report
MOV – moving
MSL – meters above sea level
NEG – negative
N-TFS – New Tactical Forecast System
NW – northwest
OVC – overcast (as in sky condition of 8/8ths cloud coverage)
PA – pressure altitude
PIREP – pilot report
RGAAF – Robert Gray Army Airfield
RMK – remark
SCT – scattered (as in sky condition of 3/8ths to 4/8ths cloud coverage)
SFC – surface
SHRA (-/+) – rain showers (- indicates light intensity and + indicates heavy intensity)
SPECI – special weather report
SW – southwest
TA – outside air temperature
TAF – terminal aerodrome forecast
TEMP – temperature
TEMPO – temporary conditions
TP – aircraft type
TSRA (-/+) – thunderstorms (- indicates light intensity and + indicates heavy intensity)
TURB – turbulence
UFN – until further notice
UTC – universal time code
VRB – variable
WV – flight level wind direction and speed
WX – weather at flight level
Z – Zulu time
26 OWS – 26th Operational Weather Squadron

Appendix G
3d Weather Squadron (3 WS) Mission Execution Forecast (MEF)

CALL 3 WS AT DSN 738-9620/9400, COM 288-9620/9400 FOR AN OFFICIAL FLIGHT WEATHER BRIEF

3d WEATHER SQ PLANNING/MISSION EXECUTION FORECAST #11				C	REVISION #	
FORECASTER	MR. BEATY	VALID TIME:	11/1600Z - 12/0400Z		REVISION TIME:	
WEBSITE	www.hood.army.mil/3ws		MONTH	NOVEMBER	YEAR	2010

SOLAR/LUNAR DATA (ALL TIMES LOCAL)

BMNT	SR	SS	EENT	MR	MS	ILLUM	MOON ANGLE ≥30 DEG
12/0556	12/0648	11/1835	11/1927	11/1733	12/0555	92%	11/2033 - 12/0313

Your Feedback is important! Let us know how we're doing!

FLIGHT LEVEL WIND AND TEMP

500'	1000'	2000'	3000'	5000'	6000'	8000'	10000'
16020	16020	17030	17035	22025	26030	26035	27040
+10	+09	+07	+05	+01	00	-05	-08

MINIMUM FREEZING LEVEL: 6000 Ft

SPACE WEATHER EFFECTS

GPS	G	Unlikely Degradation
UHF	G	Unlikely Degradation
HF	G	Unlikely Degradation

FLIGHT HAZARDS WITHIN 150NM OF FORT HOOD

HAZARD	LEVEL	INTENSITY/COVERAGE	LOCATION
TURBULENCE	SFC-080//180-400	LGT-MDT	ENTIRE LOCAL FLYING AREA
ICING	060-160	LGT RIME	N1/2 FLYING AREA (NORTH OF AUS)
THUNDERSTORMS	MT450	SCT	S1/3 FLYING AREA (SOUTH & EAST OF AUS)

GRAY AND HOOD AAF TAKEOFF AND LANDING DATA

VALID TIME	MIN ALSTG	MAX TMP		GRAY AAF (KGRK)		HOOD AAF (KHLR)	
		C	F	MAX PA	MAX DA	MAX PA	MAX DA
1600Z - 1900Z	29.85 INS	8	46	1081 Ft	654 Ft	990 Ft	541 Ft
1900Z - 2200Z	29.83 INS	9	48	1099 Ft	807 Ft	1008 Ft	694 Ft
2200Z - 0100Z	29.92 INS	9	48	1016 Ft	704 Ft	925 Ft	591 Ft
0100Z - 0400Z	30.00 INS	7	45	942 Ft	353 Ft	851 Ft	240 Ft
0400Z - 0700Z	30.10 INS	5	41	850 Ft	-22 Ft	759 Ft	-136 Ft
0700Z - 1000Z	30.17 INS	3	37	785 Ft	-363 Ft	694 Ft	-477 Ft
1000Z - 1300Z	30.20 INS	0	32	758 Ft	-790 Ft	667 Ft	-904 Ft
1300Z - 1600Z	30.28 INS	1	34	685 Ft	-750 Ft	594 Ft	-864 Ft

FT HOOD RESERVATION FORECAST (INCLUDES RGAAF, HAAF, AND TEST AREAS III AND V)

TIME (Z)	WIND (KTS)	VISIBILITY/WEATHER	CLOUDS/CEILINGS
16 - 21	17015G25	5 -SHRA	SCT010 BKN020
21 - 24	33020G30	7	SCT040 (LLWS)
00 - 04	36010G15	7	SKC

NOTE: ABOVE CONDITIONS ARE THE MINIMUM EXPECTED

FORECAST FOR FORT HOOD RESERVATION WILL BE AMENDED FOR:

CEILINGS 3000', 1000', AND 500'
VISIBILITY 3 MILES AND 1/2 MILE
THUNDERSTORMS
MODERATE OR GREATER ICING/TURBULENCE

FORT HOOD RESERVATION PLAIN LANGUAGE FORECAST	CLOUDY, WINDY WITH RAIN SHOWERS; HIGH TEMP UPPER 40S. CLEARING THIS AFTERNOON WITH GUSTY NORTH WIND; TURING COLDER; LOW TONIGHT NEAR 30. WINDY AND COLD TOMORROW WITH HIGH UPPER 30S.

WESTERN TRAINING AREA FORECAST

WESTERN TRAINING AREA — ROUTE FORECAST	WIND / VISIBILITY / SIG WEATHER / SKY CONDITION
YELLOW ROUTE	18015G25 3 -SHRA BKN015 // AFT 19Z: 33020G30 7 BKN030
RED ROUTE	18015G25 3 -SHRA BKN015 // AFT 20Z: 33020G30 7 BKN030
BLUE ROUTE	18015G25 3 -SHRA BKN010 OVC020 // AFT 21Z: 33020G30 7 BKN020
GREEN ROUTE	18015G25 3 -SHRA BKN010 OVC020 // AFT 21Z: 33020G30 7 BKN020

NOTE: ABOVE CONDITIONS ARE THE MINIMUM EXPECTED

CALL 3 WS AT DSN 738-9620/9400, COM 288-9620/9400 FOR AN OFFICIAL FLIGHT WEATHER BRIEF.

SEE 3 WS WEBSITE FOR LATEST WATCHES, WARNINGS, AND ADVISORIES (CLICK ON FORT HOOD CURRENT CONDITIONS)

Figure G-1. Sample of 3d Weather Squadron (3 WS) mission execution forecast (MEF)

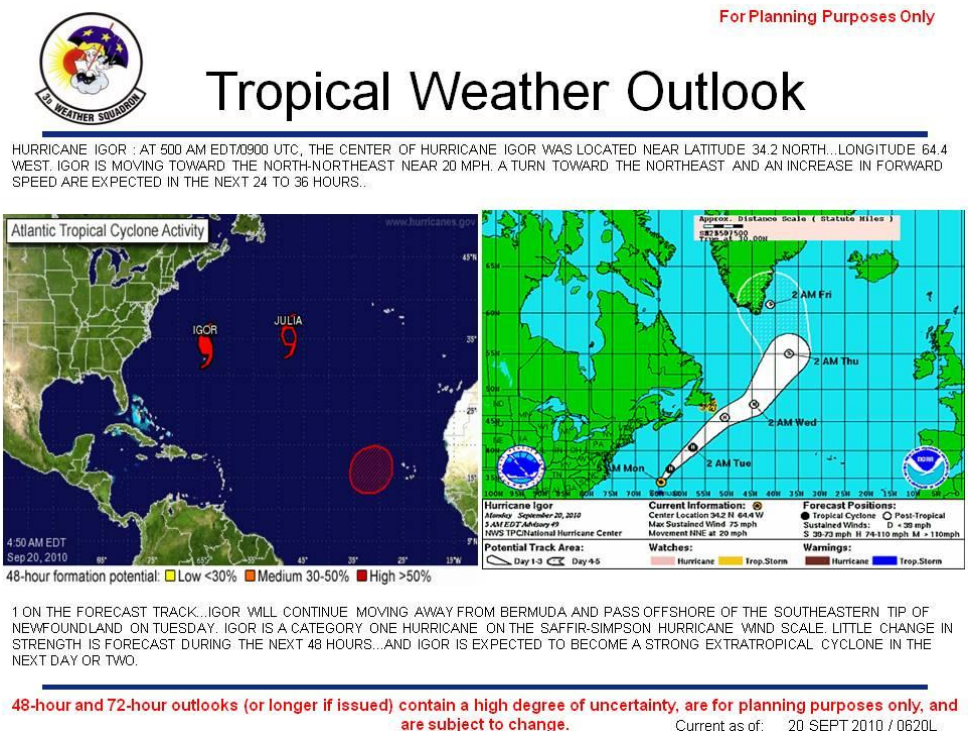

Figure G-2. Sample of 3d Weather Squadron (3 WS) Tropical Weather Outlook

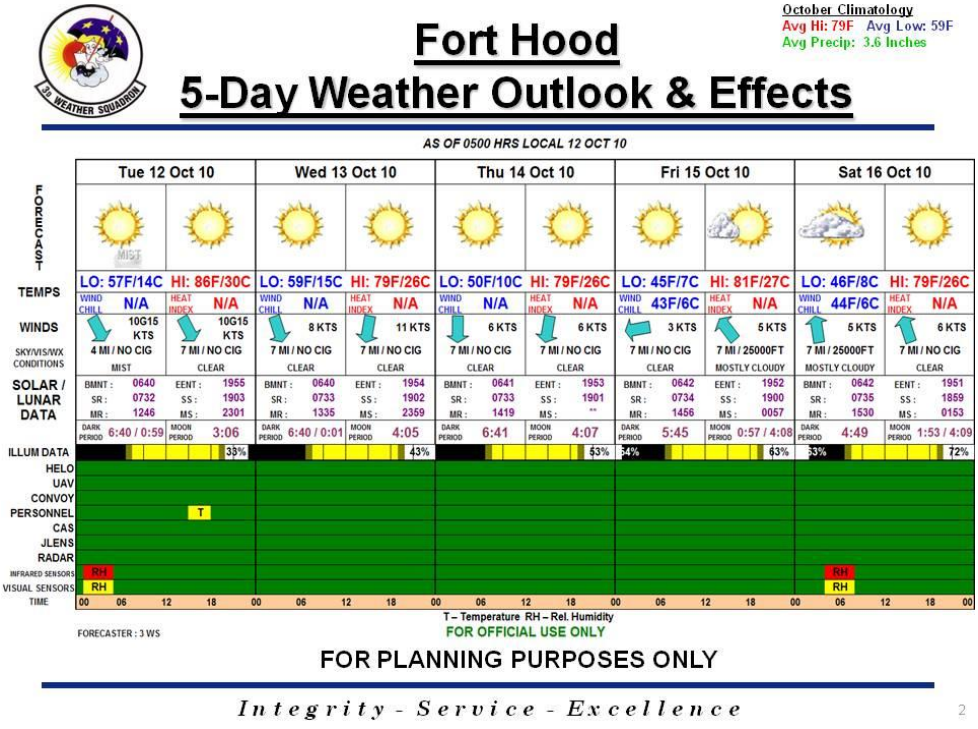

Figure G-3. Sample of 3d Weather Squadron (3 WS) 5-Day Forecast

Appendix H
Weather Impacts to Fort Hood

These impacts to Fort Hood aviation and non-aviation assets are generally aligned with standard weather warning and/or advisory criteria listed in appendix D and E of this publication. Additional impacts can be found in Army Regulation 95-1 and Fort Hood Regulation 95-1. Operators should refer to Army manuals and other associated technical documents to define specific impacts to individual weapon systems and/or equipment and should consult with their assigned SWO or staff weather noncommissioned officer (SWNCO).

Table H-1. Weather impacts

Weather Phenomena	Impact	Customer Action
Tornado	Personal injury and/or property, aircraft and/or equipment damage	Seek shelter; recall and/or ground all aircraft--hangar high-priority aircraft, divert aircraft; man emergency control centers; warn populace; establish severe weather and/or disaster radio network; man disaster response teams
Hail > 3/4 inch	Personal injury and/or property, aircraft and/or equipment damage	Seek shelter; recall and/or ground all aircraft--hangar high-priority aircraft, divert aircraft
Surface wind > 50 knots	Personal injury and/or property, aircraft and/or equipment damage	Recall and/or ground all aircraft—hangar and/or tie-down aircraft; secure loose equipment; limit outdoor high-risk activities
Lightning w/i 5 NM	Lightning strike and/or static discharge damage--delay of operations	Cease aviation refueling; limit outdoor activities to protect personnel; cease explosives and/or ammunition operations; shutdown computers--backup generators
Freezing precipitation or heavy snow > 2 inches w/i 12 hours	Icing on roads--hazard to driving; icing on aircraft and/or equipment--delay or curtailment of operations	Restrict flying; hangar or protect aircraft; report runway conditions (runways and/or taxiways and/or ramps); sand and/or salt on overpasses and intersections, close roads—limit and/or restrict post driving
Hail < 3/4 inch	Possible personal injury and/or property and/or aircraft and/or equipment damage	Seek shelter; hangar high-priority aircraft; divert aircraft--increase operational risk assessment

Table H-1. Weather impacts - Continued

Weather Phenomena	Impact	Customer Action
Heavy rain > 2 inches w/i 12 hours	Flooding (flash flooding); flight hazard	Restrict vehicle movement (off-road)--avoid water crossings; restricts UAV flight operations and degrades (unusable) imagery--increase operational risk assessment
Surface wind > 45 knots	Personal injury and/or property and/or aircraft equipment damage	Cease AH-64, UH-60, and CH-47 start-up and shutdown
Surface wind > 35 but < 50 knots	Possible property and/or aircraft and/or equipment damage	Consider hangar and/or tie-down aircraft; secure loose equipment; operations; limit outdoor high-risk activities--increase operational risk assessment
Surface wind > 30 knots	Flight hazard and/or aircraft damage	Consider hangar and/or tie-down aircraft; secure loose equipment; cease UH-1 start-up; restrict UAV operations; limit outdoor high-risk activities--increase operational risk assessment.
Surface wind > 25 knots	Property and/or aircraft and/or equipment damage	Cease UAS takeoff operations
Surface instantaneous wind gust spread > 15 knots	Property and/or aircraft and/or equipment damage	Cease UH-1 start-up operations; cease AH-64 launch operations – increase operational risk assessment
Crosswind component > 25 knots (dry rwy) > 22 knots (wet rwy)	Flight hazard	Restricts C-12 (RC-12) operations (takeoff and landing prohibited)
Crosswind component > 20 knots	Flight hazard	Restricts C-560 (UC-35) operations (takeoff and landing prohibited)
Crosswind component > 15 knots	Flight hazard	Restricts Hunter UAS Operations (takeoff and landing prohibited)
Icing	Flight hazard	Cease or restrict flying for aircraft (including UAS) with no deicing capability – increase operational risk assessment for all other aircraft
Moderate turbulence (CAT I aircraft)	Flight hazard	Restrict UAS flight operations; increase operational risk assessment for all other aircraft
Moderate turbulence (CAT II aircraft)	Flight hazard	Increase operational risk assessment
Severe turbulence	Flight hazard	Cease all flying operations
Low-level wind shear (below 2000 feet AGL w/I 50 NM of Fort Hood)	Flight hazard	Exercise caution on takeoff and landing and low level flight – increase operational risk

Table H-1. Weather impacts - Continued

Weather Phenomena	Impact	Customer Action
Thunderstorms	Flight hazard: impact field operations	Caution; avoid thunderstorm areas; limit outdoor activities – increase operational risk assessment
Wind chill temperature ≤ 10F	Personal injury	Advise post populace; limit outside activities – increase operational risk assessment
Ceiling < 3000	Flight hazard	NWS/FAA MVFR ceiling conditions—increase operational risk assessment. Restrict UAS operations (takeoff and/or landing prohibited)
Ceiling and/or visibility < 1000 / 3	Degrades flight operations RGAAF, HAAF, Reservation, WTA, all routes/corridors	Cease VFR operations
Ceiling and/or visibility < 500 / 1/2	HAAF landing minimum	Cease flying activities
Ceiling and/or visibility < 200 / 1/2	RGAAF landing minimum	Cease flying activities

Legend for Table H-1:

AGL – above ground level
CAT – category
F – Fahrenheit
NM – nautical mile
RWY – runway
UAS – unmanned aircraft system
UAV – unmanned aerial vehicle
UH – utility helicopter
VFR – visual flight rules
W/I – within
WTA – western training area

Appendix I
Weather Effects Criteria to III Corps Combat Operations

The following list is compiled from a combination of manuals, including Joint Publication (JP) 3-59 (Joint Doctrine, Tactics, Techniques, and Procedures for Meteorological and Oceanographic Operations), Field Manual 34-81 (Weather Support for Army Tactical Operations), and various equipment technical orders to present a general picture of weather impacts to most major Army combat operations. This list is not all-inclusive nor is it intended to restrict SWOs and/or SWNCOs to these limitations. SWOs and SWNCOs should use this list as a baseline, expanding or changing it as needed to suit the limitations and operational requirements of their individual customers.

Table I-1. Weather effects criteria

Operation and System	Favorable (no degradation)	Marginal (some degradation)	Unfavorable (significant degradation)
Rotary Wing (HELO)			
Ceiling and/or visibility	Greater than or equal to 1,000 ft and/or 4,800 m		Less than 500 ft and/or 800 m
Weather and/or precipitation	None	Blowing sand	Thunderstorms or freezing
Wind speed and/or gust spread	Less than 30 knots and/or less than 15 knots		Greater than or equal to 45 knots and/or greater than 15 knots
Density altitude	Less than 5,000 ft		Greater than or equal to 6,000 ft
Turbulence or icing	Less than or equal to none and/or trace	Light and light	Greater than or equal to moderate and moderate
Close Air Support			
Ceiling and/or visibility	Greater than or equal to 10,000 ft and/or 4,800 m	Greater than or equal to 5,000 ft and/or 4,800 m	Less than 5,000 ft and/or 4,800 m
Weather	Isolated thunderstorms	Few or blowing sand	Scattered
Air Interdiction			
Ceiling and/or visibility	Greater than or equal to 300 ft400 m		Less than 300 ft and/or 400 m

Table I-1. Weather effects criteria - Continued

Operation and System	Favorable (no degradation)	Marginal (some degradation)	Unfavorable (significant degradation)
Unmanned Aerial Vehicles			
Ceiling and/or visibility	Greater than or equal to 2,000 ft and/or 4,800 m		Less than 500 ft and/or 1600 m
Weather and/or precipitation	None	Light and/or moderate	Heavy or freezing
Head wind or cross wind	Less than or equal to 25 knots or 15 knots		Greater than 25 knots or 15 knots
Gust spread	Less than 35 knots		Greater than or equal to 35 knots
Turbulence or icing	Occasional light Cat II or none	Light Cat II or trace	Occasional Moderate Cat II or greater than trace
Aerial Reconnaissance			
Ceiling and/or visibility	Greater than or equal to 5,000 ft and/or 4,800 m		Less than 1,000 ft and/or 1,600 m
Weather	None	Blowing sand	Thunderstorms
Wind	Less than 60 knots		Greater than or equal to 60 knots
Icing	None	Trace	Greater than or equal to light
Night Vision Goggles			
Cloud cover or ceiling	Less than 50 percent or greater than or equal to 3,000 ft overcast		
Visibility or weather	Greater than 800 m or light-moderate precipitation	Less than 800 m or heavy precipitation	
Temperature	33F to 124F	Greater than or equal to 125F	
Smoke			
Wind	6-11 knots	3-5, 12-19 knots	Less than 2 or greater than 20 knots
Weather	None	Light or moderate precipitation	Heavy Precipitation
Temperature	Less than 80F		Greater than 120F

Table I-1. Weather effects criteria (continued)

Operation and System	Favorable (no degradation)	Marginal (some degradation)	Unfavorable (significant degradation)
Nuclear, Biological, Chemical			
Ceiling and/or temperature	Greater than 600 ft and/or 86F to 32F	Less than 600 ft and/or greater than 86F	Less than -15F
Weather	None	Light precipitation	Moderate precipitation
Low level inversion and/or stability	Yes or stable	No or unstable	
Wind	0-9 knots		Greater than 20 knots
Personnel			
Temperature or heat index	84F to 33F	greater than 85F or less than 33F	Greater than 95F or less than -25F
Wind chill	Greater than 15F		Less than -25F
Weather or precipitation	Light liquid or snow	Moderate or freezing drizzle	Heavy or light freezing rain
Vehicles			
Snow depth	Less than 6 in		Greater than 12 in
Weather	None or light	Moderate precipitation or light freezing rain	Heavy precipitation or moderate freezing rain
Temperature	104F to 1F	Greater than 105F or less than 0F	
Air Defense Artillery			
Ceiling and/or visibility	Greater than 5,000 ft and/or 1,600 m		Less than 2,500 ft and/or 800 m
Wind	Less than 35 knots		Greater than 50 knots
Weather	None and/or light precipitation	Blowing sand or dust	Heavy precipitation
Visual Systems			
Visibility and/or weather	Greater than 3,200 m and/or light precipitation		Less than 1,000 m and/or heavy precipitation
Temperature or relative humidity	Less than 100F or relative humidity less than 80 percent	Greater than 100F or less than -25F or relative humidity greater than 80 percent	

Table I-1. Weather effects criteria (continued)

Operation and System	Favorable (no degradation)	Marginal (some degradation)	Unfavorable (significant degradation)
Infrared Sensors			
Visibility and/or weather	Greater than 3,200 m and/or light precipitation	Less than 3,200 m and/or moderate precipitation	Heavy precipitation and/or fog and/or blowing sand and/or snow
Temperature or relative humidity	125F to 20F or relative humidity less than 80 percent		Greater than 125F or less than -25F or relative humidity greater than 85 percent
Electro-Optic Air and Ground	Detect range greater than 5 km	3-5 km	Less than 3 km or IR crossover

Legend for Table I-1:

F – Fahrenheit
FT - feet
IR - infrared
KM – kilometer
M – meter

Appendix J
3d Weather Squadron (3 WS) Phone Directory

Table J-1. 3d Weather Squadron (3 WS) Phone Directory

Office	Commercial	DSN	Cell
3 WS Commander	254-288-1313	738-1313	254-289-8829
3 WS Director of Operations	254-287-7397	737-7387	254-289-8830
3 WS Squadron Superintendent	254-288-0206	738-0206	254-449-1356
3 WS Operations Superintendent	254-287-2948	737-2948	N/A
3 WS Weather Plans Flight	254-288-5965 254-288-0197 254-288-9176	738-5965 738-0197 738-9176	254-289-7531 254-289-8832 254-288-8831
Readiness and Training Flight	254-288-4264	738-4264	N/A
3 WS Commander Support Staff	254-287-2922 254-553-3655	737-2922 663-3655	N/A N/A
RGAAF Weather Station, Chief	254-288-9166	738-9166	254-288-9036

Legend for Table J-1:

DSN – defense switched network
N/A – not applicable
RGAAF – Robert Grey Army Airfield
3 WS – 3d Weather Squadron

Appendix K
Telephone Numbers

Table K-1. Telephone numbers

Office	Commercial	DSN	Fax and/or E-mail
26 OWS Flight Weather Briefings	318-529-2651 318-529-2652 318-529-2653	331-2651 331-2652 331-2653	318-529-2609 DSN: 331-2609
RGAAF Weather Station	254-288-9620 254-288-9400	738-9620 738-9400	254-288-1190 hood.3asog3 WS.woc@us.army.mil
3 WS Alternate Operating Location Bldg 90041, Room 212	254-288-4258 254-288-4259 254-288-4260	738-4258 738-4259 738-4260	254-553-3656 hood.3asog3 WS.woc@us.army.mil

Legend for Table K-1:

DSN – defense switched network
RGAAF – Robert Gray Army Airfield
3 WS – 3d Weather Squadron
26 OWS – 26th Operational Weather Squadron

Glossary

Section I
Abbreviations

ACC
air combat command

ACofS
Assistant Chief of Staff

AFB
Air Force base

AFCCC
Air Force Combat Climatology Center

AFI
Air Force instruction

AFMAN
Air Force manual

AFWA
Air Force Weather Agency

AGL
above ground level

AIREP
air report

ALSTG
altimeter setting

AOL
alternate operating location

AOR
area of responsibility

AR
Army Regulation

ARAC
Army radar approach control

ARTYMET
artillery meteorological

ASOS
automated surface observing system

ATC
air traffic control

ATTN
attention

BECMG
becoming

BKN
broken (as in sky condition of 5/8ths to 7/8ths cloud coverage)

BWF
battlefield weather flight

BWW
basic weather watch

CAT
category

CB
cumulonimbus

COC
Command Operations Center

CTA
common table of allowance

CWW
cooperative weather watch

DA
density altitude

DAO
Directorate of Aviation Operations

DD
Department of Defense (Forms)

DOD
Department of Defense

DPW
Directorate of Public Works

DSN
defense switched network

DSNT
distant

DURC
during climb

E-O
electro-optical

ETC
et cetera

EWO
emergency war order

F
Fahrenheit

FAA
Federal Aviation Administration

FCST
forecast

FEW
few (as in sky condition of 1/8ths to 2/8ths cloud coverage)

FH
Fort Hood

FL
flight level

FLIP
Flight Information Publication

FM
frequency modulation

FORSCOM
Forces Command

FT
feet

FV
flight level visibility

GPS
global positioning system

HAAF
Hood Army Airfield

HF
high frequency

Hg
mercury

HHC
Headquarters, Headquarters Company

hPa
hectopascal

HQ
headquarters

IAW
in accordance with

IC
icing

ICAO
International Civil Aviation Organization

IFR
instrument flight rules

IMCOM
Installation Management Command

IN
inches

IOC
Installation Operations Center

IR
infrared

IWWC
integrated weather warning capability

JET
joint environmental toolkit

JP
Joint Publication

JRTC
Joint Readiness Training Center

KGRK
ICAO locator for Robert Gray Army Airfield

KM
kilometer

KT
knots

L
local time

LA
Louisiana

LAN
local area network

LGT
light

LOCAL
local airfield specific criteria

M
meter

MEF
mission execution forecast

MEFP
mission execution forecast process

METAR
aviation routine weather report

MGRS
military grid reference system

MOV
moving

MSL
meters above sea level

MTOE
modified table of organization and equipment

MVFR
minimum visual flight rules

N/A
not applicable

NCOIC
noncommissioned officer in charge

NEC
Network Enterprise Center

NEG
negative

NHC
National Hurricane Center

NIPRNET
non-secure internet protocol router network

NM
nautical mile

NOTAM
notice to airmen

NTC
National Training Center

N-TFS
new tactical forecast system

NVR
night vision range

NW
northwest

OIC
officer in charge

ORM
operational risk management

OVC
overcast (as in sky condition of 8/8ths cloud coverage)

OWS
operational weather squadron

PA
pressure altitude

PARA
paragraph

PIREP
pilot report

PMSV
pilot-to-metro service

POC
point of contact

REG
regulation

RGAAF
Robert Gray Army Airfield

RMK
remark

RVR
runway visual range

RVRNO
runway visual range not available

RWY
runway

SCI
sensitive compartmented information

SCT
scattered (as in sky condition of 3/8ths to 4/8ths cloud coverage)

SFC
surface

SHRA
rain showers

SM
statute miles

SOP
standard operating procedure

SPECI
special weather report

SW
southwest

SWAP
severe weather action procedures

SWO
staff weather officer

SWNCO
staff weather noncommissioned officer

TA
outside air temperature

TAF
terminal aerodrome forecast

TDA
tactical decision aids

TDY
temporary duty assignment

TEMP
temperature

TEMPO
temporary conditions

THZ/C
toxic hazard zone/corridor

TOC
Tactical Operations Center

TP
aircraft type

TSRA
thunderstorms

TURB
turbulence

UAS
Unmanned Aerial System

UAV
unmanned aircraft vehicle

UFN
until further notice

UH
utility helicopter

UHF
ultra high frequency

US
United States

USAF
United States Air Force

USARNORTH
United States Army North

UTC
universal time code

VFR
visual flight rules

VRB
variable

W/I
within

WMO
World Meteorological Organization

WOC
Weather Operations Center

WSR-88D
weather surveillance radar – 88 Doppler

WTA
western training area

WV
flight level wind direction and speed

WX
weather at flight level

Z
Zulu time

1CD
1st Cavalry Division

1ACB
1st Air Cavalry Brigade

3ACR
3d Armored Cavalry Regiment

3ASOG
3d Air Support Operations Group

3 WS
3d Weather Squadron

4CAB
4th Combat Aviation Brigade

4th SQ 3ACR
4th Squadron, 3d Armored Cavalry Regiment

21CAV
21st Cavalry Brigade

26 OWS
26th Operational Weather Squadron

Section II
Terms

Basic weather watch
A program to ensure weather technicians provide the proper level of weather awareness to detect and report significant changes in specified weather elements.

Ceiling
The height above ground level of the lowest broken (5/8 coverage or more) or overcast (8/8 coverage) cloud layer or total obscuration.

Cooperative weather watch
A practice of augmenting a basic weather watch with information received from non-weather sources. Air traffic controllers are the most common example.

Desired lead time
The amount of advance notice a supported agency needs to react to an advisory or warning.

Equivalent chill temperature
An approximate measure of the cooling effect on exposed skin of the ambient air temperature and wind speed combined.

Gust spread
The instantaneous difference between the lull and peak wind speed.

Mission execution forecast
A weather forecast applied to affect the decision-making process of the supported military customer. The MEF includes, but is not limited to flight weather briefings and specific mission planning forecasts.

Meteorological watch
The process of monitoring the weather and informing supported agencies when certain established weather conditions that could affect their operations or pose a hazard to property or life are occurring or are expected to occur.

Mission watch
The process of monitoring aerospace weather during a specific mission (i.e., ground, air or space). It focuses on mission limiting weather impacts to ongoing military operations.

Pilot report
A report of observed flight weather conditions provided by an aircraft crew-member.

Prevailing visibility
The greatest visibility equaled or exceeded through half or more of the horizon circle.

Terminal aerodrome forecast
A forecast of required weather elements for a particular aerodrome or terminal covering a period up to 24 hours. Forecast elements within the body of the forecast text refer to the area within 5 nautical miles of the center of the aerodrome complex.

Weather advisory
Weather advisories provide specific notice to an operational agency of weather phenomena impacting operations.

Weather observation
An evaluation of one or more meteorological elements that describes the state of the atmosphere at the observation location.

Weather warning
Special notice provided to supported Fort Hood agencies giving them advance notification (with sufficient time for protective actions) when weather conditions within the forecast area exist, are imminent or are highly likely to occur of such intensity to pose a hazard to personnel, resources and property.

Weather watch
Special notice provided to supported agencies alerting them to the potential for weather conditions within the forecast area during the specified valid time of such intensity to pose a hazard to life or property. The weather watch can be thought of as a "heads up," at which time agencies need to consider implementing required protective actions should a subsequent weather warning be issued. Watches normally precede a weather warning.

26th Operational Weather Squadron
Air Force Regional Weather Center located at Barksdale AFB, LA, that provides centralized weather products and information to support DOD activities in the south central and south east CONUS, to include Fort Hood. They are responsible for the TAF and forecast weather watches and warnings IAW 26 OWS Memorandum of Agreement 15-24. In the event of a communications outage at 26 OWS, 3 WS becomes responsible for the TAF and all forecast weather watches and warnings for Fort Hood.